[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-1173; Project Identifier AD-2021-00917-T; Amendment 39-22017; AD 2022-08-14]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all The Boeing Company Model 747-8F series airplanes. This AD was prompted by reports of fuselage crown stringer cracking between station (STA) 740 and STA 1000, stringer (S)-7 to S-12. This AD requires repetitive detailed inspections for cracking of fuselage crown stringers and applicable on-condition actions. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet https://www.myboeingfleet.com. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch,

2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available at https://www.regulations.gov by searching for and locating Docket No. FAA-2021-1173.

Examining the AD Docket

You may examine the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA-2021-1173; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Stefanie Roesli, Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3964; email: stefanie.n.roesli@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all The Boeing Company Model 747-8F series airplanes. The NPRM published in the *Federal Register* on January 31, 2022 (87 FR 4826). The NPRM was prompted by reports of fuselage crown stringer cracking between STA 740 and STA 1000, S-7 to S-12. In the NPRM, the FAA proposed to require repetitive detailed inspections for cracking of fuselage crown stringers and applicable on-condition actions. The FAA is issuing this AD to address cracking in fuselage crown stringers. This condition, if not addressed, could result in the inability of a structural element to sustain limit load, and could adversely affect the structural integrity of the airplane.

Discussion of Final Airworthiness Directive

Comments

The FAA received a comment from Boeing, who supported the NPRM without change.

Conclusion

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Except for minor editorial changes, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Related Service Information under 1 CFR Part 51

The FAA reviewed Boeing Alert Requirements Bulletin 747-53A2906 RB, dated July 16, 2021. This service information specifies procedures for repetitive detailed inspections for cracking of fuselage crown stringers, repair of cracks, and a high frequency eddy current (HFEC) inspection for cracking of repaired areas. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

Costs of Compliance

The FAA estimates that this AD affects 33 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Repetitive detailed inspections	84 work-hours X $85 per hour = $7,140 per inspection cycle	$0	$7,140 per inspection cycle	$235,620 per inspection cycle

The FAA estimates the following costs to do any necessary repairs that would be required based on the results of the inspection. The agency has no way of determining the number of aircraft that might need these repairs:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
HFEC inspection	1 work-hour X $85 per hour = $85	$0	$85
Repair	Up to 550 work-hours X $85 per hour = $46,750 (per repaired area)	$2,400	Up to $49,150

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2022-08-14 The Boeing Company: Amendment 39-22017; Docket No. FAA-2021-1173; Project Identifier AD-2021-00917-T.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all The Boeing Company Model 747-8F series airplanes, certificated in any category.

(d) Subject

Air Transport Association (ATA) of America Code 53, Fuselage.

(e) Unsafe Condition

This AD was prompted by reports of fuselage crown stringer cracking between station (STA) 740 and STA 1000, stringer (S)-7 to S-12. The FAA is issuing this AD to address cracking in fuselage crown stringers. This condition, if not addressed, could result in the inability of a structural element to sustain limit load, and could adversely affect the structural integrity of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

Except as specified by paragraph (h) of this AD: At the applicable times specified in the "Compliance" paragraph of Boeing Alert Requirements Bulletin 747-53A2906 RB, dated July 16, 2021, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin 747-53A2906 RB, dated July 16, 2021.

Note 1 to paragraph (g): Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin 747-53A2906, dated July 16, 2021, which is referred to in Boeing Alert Requirements Bulletin 747-53A2906 RB, dated July 16, 2021.

(h) Exception to Service Information Specifications

Where the Compliance Time columns of the tables in the "Compliance" paragraph of Boeing Alert Requirements Bulletin 747-53A2906 RB, dated July 16, 2021, use the phrase "the original issue date of Requirements Bulletin 747-53A2906 RB," this AD requires using "the effective date of this AD."

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In

accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (j) of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by The Boeing Company Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(j) Related Information

For more information about this AD, contact Stefanie Roesli, Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3964; email: stefanie.n.roesli@faa.gov.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Alert Requirements Bulletin 747-53A2906 RB, dated July 16, 2021.

(ii) [Reserved]

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet https://www.myboeingfleet.com.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, fr.inspection@nara.gov, or go to: https://www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued on April 7, 2022.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.
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